

## REMARKS

Claims 1-22 are pending and stand rejected.

### I. Claim Rejections – 35 U.S.C. §102

Applicants respectfully traverse the anticipatory rejections of claims 1-12, 14-15, and 17-22 over Lamansky *et al.* (WO 02/15645; hereinafter ‘Lamansky I’) under 35 U.S.C. 102(b), or over Lamansky *et al.* (US 6,939,624; hereinafter ‘Lamansky II’) under 35 U.S.C. 102(e). Lamansky I and Lamansky II essentially have the same disclosure. Without acquiescence to whether Lamansky II is proper prior art under 35 U.S.C. 102(e), applicants will explain why Lamansky I or II does not disclose every limitation of claims 1-12, 14-15, and 17-22.

To anticipate a claim, the examiner must show that the cited reference teaches every element of the claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See MPEP § 2131.01.

The organic photosensitive optoelectronic device of the claims comprises an anode, an active region, and a cathode, wherein the active region comprises a donor layer and acceptor layer, and wherein the donor layer and/or acceptor layer either

(A) consists of a cyclometallated organometallic material, or

(B) comprises a cyclometallated organometallic material as a host doped with one or more other substances as dopant(s).

When the donor layer and/or acceptor layer of the active region is doped with the cyclometallated organometallic material as the host, one skilled in the art would understand that the cyclometallated organometallic material is greater than 50% of the substances in the doped donor layer and/or acceptor layer.

Lamansky I or II discloses certain phosphorescent organometallic compounds having at least one mono-anionic, bidentate, carbon-coordination ligand (page 14, lines 13-20, of Lamansky I; column 6, line 64 to column 7, line 8, of Lamansky II). Lamansky I or II discloses organic light emitting devices (OLEDs) employing the phosphorescent organometallic compounds, which can be cyclometallated (Lamansky I: page 7, lines 10-13, page 13, line 19 to page 14, line 20, page 15, lines 8-9; Lamansky II: column 4, lines 13-18,

column 6, line 42 to column 7, line 8, column 7, line 23). However, all the specific embodiments of the OLEDs disclosed in Lamansky I or II have the active region comprising the cyclometallated phosphorescent organometallic compound only as a dopant or guest compound, instead of as a host (Lamansky I: page 9, lines 10, 14 and 15, page 33, lines 1-3, page 34, lines 4-6, page 36, lines 8-10, page 37, lines 5-6 and 18-19, page 38, lines 8-9 and the last two lines, page 39, lines 9-10, page 40, lines 13, 18 and 19, page 42, lines 1-3, page 48, lines 11-18 wherein (4,5F<sub>2</sub>ppy)Pt(acac) is a dopant, page 49, line 23, page 50, line 4, page 51, lines 13-14, page 54, lines 8-15, page 55, lines 4, 5, 12, 21 and 22, page 56, lines 1, 8 and 14, page 57, lines 1, 11, 15, 16, 21 and 22, page 58, lines 21, 25 and 26, page 60, lines 9-11 and 20, page 61, line 16, page 62, lines 19-22, page 63, lines 4, 8, 10, 19, 21 and 22, page 64, lines 12, 13, 19, 20 and 23, page 65, lines 2-14 and 16, page 66, lines 1 and 18, page 68, line 7, page 69, lines 6-22) (Lamansky II: column 4, lines 13-17 and 66-67, column 5, lines 1, 2, 5-8, 16, 17 and 20, column 6, lines 4-9 and 16, column 7, lines 23 and 33, column 12, lines 42-46, column 13, lines 10-13, column 14, lines 1-17, 42-44 and 61-63, column 15, lines 13-15, 34 and 47-50, column 16, lines 20-29 and 65-67, column 20, lines 22-30 and 53-55, column 21, lines 1-3, 8-10, 48-50 and 61, column 22, lines 37-46, column 23, lines 3-13, 30-36, 41, 44, 45 and 55-59, column 24, lines 9, 43-61, column 25, lines 19, 20, 25, 66 and 67, column 26, lines 19, 20, 30, 31 and 54, column 27, lines 20-23, 28, 35, 36, 39, 40, 43, 56, 57, 59 and 60, column 28, lines 11, 19, 20, 25, 30, 31, 34-36, 38, 42, 46, 50 and 60, column 29, lines 13 and 54, and column 30, lines 16-37).

The Office Action dated December 13, 2007 (page 17, item 3) states that “the applicant argues that Lamansky does not explicitly state that the cyclometallated phosphorescent organometallic compound is used only as a dopant or guest compound in the active region of the OLEDs, all the specific embodiments of the OLEDs disclosed in Lamansky have the active region comprising the cyclometallated phosphorescent organometallic compound as a dopant or guest compound.” The Office Action points to page 7, lines 10-11, of Lamansky as evidence that Lamansky refers specifically to OLEDs in which the active layer is composed of the phosphorescent organic compound that is created when the ligands of Figures 5a-5d are combined with the ligands of Figures 6a-6c and a heavy transition metal such as Ir (page 13, lines 19-23 and page 14, lines 1-5 of Lamansky I). The Office Action also points out that several of the materials resulting from the combination

of some of the ligands in Figures 5a or 5d with the ligands of Figure 6c and Ir are cyclometallated organometallic compounds.

The Office Action further states in page 3 that Lamansky I “discloses active region include the electron withdrawing groups/acceptors which remove electrons from the donor/highest occupied molecular orbitals (HOMO) (page 15, lines: 202-25 and page 19; lines: 14-20) which consists of the cyclometallated (page 15; lines 7-15) organometallic material/ligand and metal atom (page 19; lines 20-21). The highest occupied molecular orbital (HOMO) is the donor orbital as evidence given by Wypych, (**Handbook of Solvents**, ChemTee Publishing copyright 2001, Toronto-New York, p. 572-572).

Lamansky discloses a guest-host system (page 13; lines 1-3) such that the host is doped with a guest material phosphor (page 38; lines 9-13)” (emphasis in the original). In the first sentence of the Office Action quoted above, it is not clear what “consists of the cyclometallated (page 15: lines 7-15) organometallic material/ligand and metal atom (page 19; lines 20-21).” Nevertheless, applicants note that Lamansky I does not disclose any OLEDs having an active region, wherein the donor layer and/or acceptor layer of the active region consists of a cyclometallated organometallic material. Page 15, lines 7-15 and 20-25, and page 19, lines 14-21 of Lamansky I cited by the Office Action does not disclose that the donor layer and/or acceptor layer of the active region of the OLED consists of a cyclometallated organometallic material.

Applicants also note that Lamansky II does not disclose any OLEDs having an active region, wherein the donor layer and/or acceptor layer of the active region consists of a cyclometallated organometallic material. The Office Action does not cite any portion of Lamansky II that discloses any OLEDs having an active region, wherein the donor layer and/or acceptor layer of the active region consists of a cyclometallated organometallic material.

Applicants also note that Lamansky I or II does not disclose any OLEDs having an active region, wherein the donor layer and/or acceptor layer of the active region comprises a cyclometallated organometallic material as a host and wherein the donor layer and/or acceptor layer of the active region is doped. The Office Action fails to cite any portion of Lamansky I or II that discloses any OLEDs having the donor layer and/or acceptor layer doped wherein a cyclometallated organometallic material is the host.

Thus, applicants emphasize the Lamansky I or II fails to disclose each and every limitation of the pending claims. Withdrawal of the anticipatory rejections over Lamansky I or II is requested.

II. Claim Rejections under 35 U.S.C. §103(a)

The Office Action erroneously states that “[c]laims 13 and 16 are rejected under 35 U.S.C. 103(a) as being anticipated by Lamansky et al. (WO 02/15645) as applied to claim 1, and in further view of Okada et al. (US Patent No. 7,189,917)”. Since 35 U.S.C. 103(a) is not the proper statutory basis for anticipatory rejections, applicants assume that the Office Action intends to reject claims 13 and 16 under 35 U.S.C. 103(a) as being obvious over Lamansky I, in view of U.S. Patent No. 7,189,917 (hereinafter referred to as Okada).

To establish a *prima facie* case of obviousness, the examiner must show that the prior art references themselves or the knowledge generally available to one of ordinary skill in the art would provide a reasonable expectation that the claimed invention can be made or used successfully. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). *See* M.P.E.P. § 2142. Applicants contends that the Office Action has failed to make a *prima facie* case because Okada fails to remedy the deficiencies of Lamansky I discussed above. Lamansky I in view of Okada does not teach or suggest all of the elements of the claimed invention and does not suggest modifying the OLEDs of Lamansky I by using the cyclometallated phosphorescent organometallic compound as a host. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) as being obvious in view of the cited prior art is respectfully requested.

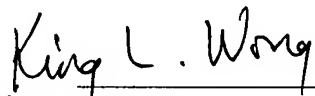
III. Conclusion

It is respectfully submitted that the present application is in a condition for allowance and a notice to that effect is earnestly solicited. In the event that the filing of this paper is deemed not timely, applicants petition for an appropriate extension of time. The Commissioner is authorized to charge Deposit Account No. 11-0600 for the extension of time fee and any additional fees that may be required in relation to this paper.

Respectfully submitted,

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